

Descending Degeneration in the Crus Cerebri. By G. ROSSOLYMO. *Neurol. Centralbl.*, Nos. 7 and 8, 1886.

It is well known that after a lesion of the central convolutions a descending degeneration can be traced through the middle third of the crus cerebri. The middle third of the crus is therefore known to be the position occupied by the motor tract.

The researches of Brissaud have proven that the inner third of the crus degenerates downward after lesions of the frontal convolutions. In it there pass the tract which joins these convolutions with the nuclei in the pons varolii. Rossolymo now reports two cases of degeneration of the outer third of the crus cerebri. In the first case an embolus in the middle cerebral artery had produced extensive atrophy of the frontal, central and anterior portions of the parietal and temporal convolutions; the posterior half of the parietal, and temporal lobes and the occipital lobe escaping. The entire crus cerebri was atrophied and degenerated, only a few fibres in its outer third being preserved. The patient had no sensory symptoms, and lived one year after the onset of the disease. In the second case the outer and middle thirds of the crus were degenerated after a lesion of the parietal and temporal lobes.

1. Bechterew has reported a case of total destruction of one hemisphere with degeneration in the entire crus, and another case of destruction of the parietal, temporal and occipital lobes with degeneration of the outer third of the crus.

2. These observations would render probable a connection of the outer third of the crus with the posterior part of the parietal, and with the temporal lobes.

3. Charcot and his school have held with Meynert that sensory impulses are transmitted upward in the outer third of the crus. This view is opposed by the statements of Flechsig and by the facts here recorded, since in this case the outer third of the crus was destroyed without the production of sensory symptoms. These facts also confirm the position advanced by the reporter that the sensory tract lies in the outer half of the tegmentum and does not pass through the crus.—*JOUR. NERV. AND MENT. DIS.*, July, 1884.

M. A. STARR.

A Contribution to the Comparative Study of Convulsions. By J. HUGHLINGS-JACKSON, *Brain*, April, 1886.

Among an interesting series of articles in a remarkably good number of *Brain*, this article of Hughlings-Jackson is the most remarkable. The subject-matter, the manner in which it is presented, the peculiar diction, all are truly * * * Jacksonian! The author returns to a subject which he discussed most skilfully years ago, and he does this apparently to proclaim a change in his former views. He believed in former years that "no variety of convulsion in man arose from any sort of change below the cerebrum proper"; but he now holds that *some* convulsions in children depend on lesion of the pons or medulla oblongata. He

refers to "inward fits" (*laryngismus stridulus*) or "respiratory convulsions," and these constitute the special subject of this paper. To explain *these* convulsions he has written a few pages on convulsions in general, and written in such condensed fashion that it is almost impossible to repeat this part of the paper without reproducing the original nearly verbatim. J. insists on a three-fold scale of fits: 1. Epileptic fits (epilepsy proper) depending on discharging lesions of parts of the highest level of evolution; 2. Epileptiform seizures, depending on discharging lesions of parts of the middle level of evolution (1 and 2 are cerebral convulsions); 3. inward fits (respiratory convulsions) and some other fits depending on discharges beginning in parts of the lowest level of evolution.

Now by the lowest level of evolution (in this anatomico-physiological scheme) is meant the spinal cord, medulla oblongata, and pons Varolii. "The lowest sensori-motor centres represent all parts of the body, animal and organic, 'from nose to feet' in simplest combinations." The middle level of convolution consists of the various motor centres of Ferrier's and sensory centres in the cortex. "The middle sensori-motor centres re-represent all parts of the body, organic and animal, in more complex combinations."

The highest level of evolution includes the frontal or prefrontal lobes, highest motor centres, and the occipital lobes, the highest sensory centres.

The "inward fit" is an instance of a fit on the lowest level. These fits seem to be confined almost exclusively to the period between the sixth and twenty-fourth month. Jackson explains this limitation by age in the following way:

"These inward fits occur in the very young whose lowest level of evolution is the most developed and yet most actively developing, and which from the comparatively little development of higher centres is little controlled." (These speculations are based upon the valuable researches of Soltmann, upon which Meynert also bases his views of the gradual development of the infant's mind.) But why do these "inward fits" occur chiefly in the rickety? "Excessive venosity," as we have all long since known, acts as a stimulant upon the respiratory centre, and "excessive venosity" is favored in various ways in rickety children.

"The ribs being abnormally soft in the rickety, and thus not 'holding out' during the descent of the diaphragm, the efforts of that muscle are more or less neutralized. This favors venosity. Further, the attacks of *laryngismus* occur chiefly at night, when, from sleep there is still less perfect respiratory action, and thus a condition for still greater venosity * * * too great venosity will stimulate the respiratory centres so overmuch as to produce not a sequence of normal respiratory movements, but that excessive development and contention of them which is convulsion." We cannot refer now to the section of "Universalisation of Convulsion beginning Respiratorily" (Jacksonian English!), and will

only add, in conclusion, that J. shows that the therapeutic measures generally employed, directly or indirectly, help to reduce excessive venosity. The author recommends cod-liver oil, cold sponging, carrying out child in cold weather as constitutional remedies; for treatment of the convulsions proper, he advises the use of musk, belladonna, chloral; and artificial respiration if the respiratory centre should become exhausted after a convulsion. The subject of respiratory fits, experimentally produced, the author promises to discuss in a future paper. B. S.

Case of Cerebral Tumor. By A. HUGHES BENNETT, M.D., F.R.C.P.—the Surgical Treatment by RICKMAN J. GODLEE, M.D., F.R.S.S.—Reprint from vol. 68 of the "Medico-Chirurgical Transactions," London, 1885.

This case, if we mistake not, enjoys the sad distinction of having made the round of the daily press in England and America.

A farmer, æt. 25, applied at the Hospital for Epilepsy and Paralysis Nov. 3, 1884. He complained of paralysis of left hand and arm. Four years ago a piece of timber fell from a house, struck him on the left side of the head, and knocked him down. Loss of consciousness for a few moments only. With the exception of occasional slight headaches, remained in good health for a year. At the end of that time he began to experience a feeling of twitching in the left side of mouth and tongue. This developed into attacks of a paroxysmal character which became more frequent. Some months afterwards he had a "fit," which began with a peculiar feeling in the left side of the face and tongue and turning of the head to the left side. The sensation ran down the entire left side, and culminated in loss of consciousness and general convulsions. These twitchings and "fits" continued for two and a half years.

Six months before admission spasmodic twitchings of left hand and arm without loss of consciousness were observed daily, alternating with the already mentioned twitchings of the face. Shortly afterwards, weakness of left fingers, hand, and forearm, which gradually increased to complete paralysis. Since August, 1884, twitchings set in in the left leg, which usually supervenes upon, and is accompanied by, similar attacks in left arm. The left leg grew weak, and the patient walked a little lame.

On deep and hard pressure there was an area in the parietal region close to the right of the sagittal suture (on a level with a line drawn vertically from the anterior portion of the external meatus), which was more sensitive than the neighborhood. Double optic neuritis, slight immobility of left side of face, distinct on attempted forced movements; tongue, when protruded, pointed slightly to the left. Hearing less acute in right ear. Knee-jerk exaggerated on left side. Patient suffered greatly from lancinating pains in head—such attacks lasting frequently twelve or more hours at a time. Attacks of vomiting not necessarily associated